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Monterey, California



THESIS

**POACHING AND COUNTERPOACHING IN
SUB-SAHARAN AFRICA: A STRATEGY
FOR ENGAGEMENT, DEVELOPMENT,
AND PROTECTION**

by

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and
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December 1997

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**POACHING AND COUNTERPOACHING IN
SUB-SAHARAN AFRICA: A STRATEGY FOR
ENGAGEMENT, DEVELOPMENT, AND PROTECTION**

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from the

**NAVAL POSTGRADUATE SCHOOL
December 1997**

ABSTRACT

The purpose of this thesis is to define the poaching problem in sub-Saharan Africa, to provide for the development of solutions, and to illustrate the significance of the problem to both Africa and the United States. This objective is achieved by illustrating the similarities between poaching and insurgency, developing a typology for the classification of different forms of poaching, and applying an insurgency/counterinsurgency model to these scenarios. Additionally, by addressing the negative effects poaching has on economic, political, and social issues we demonstrate that poaching is a problem that extends beyond the loss of selected animal species.

Through the application of our model to actual cases of poaching, we demonstrate the utility of drawing upon insurgency theory for providing solutions to the poaching problem. As a result, this thesis offers an atypical approach for systematically conceptualizing and implementing effective counterpoaching strategies. After developing a framework for analytically thinking about the poaching problem, we make recommendations regarding the role of specific US forces within a comprehensive strategy of engagement. Finally, we comment on the importance of defining strategies whose methods of implementation are aligned with the desires, limitations, and capabilities of the host nation.

TABLE OF CONTENTS

I.	INTRODUCTION	1
A.	PURPOSE.....	1
B.	BACKGROUND	1
C.	THE TYPICAL RESPONSE	6
D.	SIGNIFICANCE	8
E.	METHODOLOGY	9
II.	ADAPTING THE COUNTERINSURGENCY MODEL TO COUNTER POACHING	11
A.	MODEL SELECTION	11
B.	INSURGENT/COUNTERINSURGENT MODEL.....	11
C.	POACHING DEFINED	12
D.	THE DYNAMICS OF THE POACHING PROBLEM.....	15
E.	THE ROOT OF THE POACHING PROBLEM.....	17
F.	THE GOVERNMENT ROLE.....	18
G.	APPLYING THE COUNTERPOACHING MODEL.....	22
H.	COUNTERPOACHING STRATEGIES.....	23
1.	Internal/Commercial Poaching.....	23
2.	Internal/Subsistence Poaching.....	24
3.	External/Commercial Poaching.....	25
4.	External/Subsistence Poaching.....	25

III.	CASE STUDIES.....	27
A.	KENYA (INTERNAL/COMMERCIAL)	28
1.	Background	29
2.	Kenya's Approach	30
3.	Analysis	33
B.	ZAMBIA (INTERNAL/COMMERCIAL)	34
1.	Background	35
2.	Zambia's Approach.....	37
3.	Analysis	39
C.	ZIMBABWE (EXTERNAL/COMMERCIAL)	40
1.	Background	40
2.	Zimbabwe's Approach.....	41
3.	Analysis	45
D.	CENTRAL AFRICAN REPUBLIC (EXTERNAL/ SUBSISTENCE)	47
1.	Background	47
2.	CAR's Solution	50
3.	Analysis	51
IV.	CONCLUSIONS AND RECOMMENDATIONS	55
A.	OPPORTUNITY COST DEFINED	57
B.	PROTECTION AND UTILIZATION	61

C.	ENGAGEMENT STRATEGY	62
D.	SHORT CYCLE SOLUTIONS.....	65
E.	A WIN-WIN SITUATION.....	66
F.	THE MERITS OF ABSTRACTION.....	68
G.	A WORD OF CAUTION.....	69
	LIST OF REFERENCES.....	73
	INITIAL DISTRIBUTION LIST	77

LIST OF FIGURES

Figure 1.	Insurgent/Counterinsurgent Model.....	13
Figure 2.	Counterpoaching Model	24

LIST OF TABLES

Table 1.	Countries Facing Poaching Problems by Type & Rationale	15
Table 2.	Tourist Revenue and Percent of GDP by Year.....	58
Table 3.	CAMPFIRE Revenue	61

I. INTRODUCTION

A. PURPOSE

The purpose of this thesis is to define the poaching problem in sub-Saharan Africa and to develop possible solutions for the problem. We will argue that governments confronted with poaching face dilemmas that are analogous to the traditional problems of insurgency. By illustrating the similarities between insurgencies and poaching, we will demonstrate that the solutions for combating poaching are analogous to those for combating insurgencies. We will analyze the varied aspects of poaching through the use of a modified insurgent/counter-insurgent model and propose solutions to the problem. The application of this model will demonstrate that low impact, low cost solutions may best address the poaching problem from a number of perspectives. Additionally, we will show that the types of options available to United States policy makers in Sub-Saharan Africa, through the use of Special Operations Forces, may provide long term benefits which are disproportionate to their cost.

B. BACKGROUND

Historically, United States (US) policy towards sub-Saharan Africa can be termed erratic at best and incoherent at worst. During the cold war era, US policy was aimed at simply countering any Soviet influence in the region. With the fall of the Soviet Union, US Policy seems to be one of getting involved in African

affairs only during times of crisis: severe famine, ethnic genocide, and gross cases of regional instability. By following a reactive policy towards Africa the US has involved itself at the most expensive end of the spectrum of engagement, when the prognosis for success is at its lowest point.¹ Today, Africa presents an opportunity for the US to become pro-active in its foreign policy and to pursue initiatives that will benefit the countries of Africa in the present and promote stability into the future. Today's worldwide concerns for the global environment open inroads to the application of US preventive-diplomacy on the African Continent.

Environmental security is a subject that is drawing a great deal of attention in the US and in many other countries around the world. These concerns range from issues regarding nuclear waste disposal to oil spills and the problems of desertification. Today, US policy-makers have come to the conclusion that environmental issues are more closely associated with matters of economic stability and broader notions of national security, then during any other time of US foreign policy. This is evidenced by the many multilateral environmental agreements that currently exist between the US and other nations. Environmental issues have been incorporated into American foreign policy. Included in these issues are the concerns for the habitat and diverse wildlife of the African continent.

¹US Foreign Policy Toward Africa.

These concerns represent an opportunity for meaningful US engagement in Africa.²

The African continent, and specifically sub-Saharan Africa, is home to many wildlife species that are indigenous to that continent alone. A large percentage of sub-Saharan African countries rely on tourism for a significant portion of their GNP. Countries that view the preservation of wildlife as a long term, sustainable, and renewable resource have come to understand and appreciate the negative effects of animal poaching. Countries that are ineffective in combating poaching stand to suffer losses that far exceed the extinction of selected animal resources. Poaching causes economic loss by destroying or depleting animal resources which can represent a significant percentage of generated income. Additionally, loss of animal diversity causes ecological problems and contributes to the adoption of harmful long term agricultural practices.³ Poaching's effects on issues of national and regional security is perhaps the most profound. The government's inability to confront poaching casts doubt on its ability to cope with both internal and external threats. Internally, this is reflected in the inability to enforce specific laws within the confines of the country.

²Baker, James former US Secretary of State, before the House Resources Committee, Subcommittee on Fisheries, Wildlife, and Oceans. 20 June 1996.

³Dr. Brian Child, Statement By Dr. Brian Child, Submitted To The House Committee In International Relations, Subcommittee On Africa On Economic Development Of Africa's Resources, March 17, 1997.

Externally, this reflects an inability to control border regions and to reassure the population that the government can protect them from external threats. In laymen's terms, poachers represent a fundamental challenge to national sovereignty as well as a very real economic threat.

In general, but from the perspective of African governments, the poacher is an insurgent. In particular, the poacher presents a multi-dimensional problem, in particular, to the government. Like the insurgent, he operates where the government is weak, and his work destroys the credibility of the established regime. His existence questions the government's ability to uphold its laws, protect its people, and enforce its borders. The insurgent and the poacher work to erode the linkage between the government and the population from which they draw support. The poacher, like the insurgent, finds himself forced to navigate within the boundaries of the environment in which he operates. The poacher may experience varying degrees of difficulty regarding his ability to maneuver. The poacher may enjoy the full support of the local population, being able to call upon them for supplies, aid, or to conceal his presence from the government. The poacher may be a member of the local population. In this best case scenario, the poacher has complete freedom to come and go as he pleases, enjoys complete anonymity, and can count on the local community for support.

At the very least, the poacher requires that the population tolerate his presence and not pursue hostile policy towards him.⁴ If the poacher is not a member of the community he will be unable to hide his presence and must rely on the community to conceal him. If the poacher finds the population opposed to his existence, there is little he can do except to find another area in which to operate.

However, poachers, unlike insurgents, do not desire to supplant the existing government, but rather to exploit the fissures that may exist between the host government and the populace. In this regard, the poacher can be even more elusive, as his goal is not to eventually confront the government, but to forever stay hidden. The end the poacher seeks is not to displace the government, but to take advantage of its inefficiency.

In 1991, the US dedicated fifteen million dollars of bio-diversity funding to sub-Saharan Africa. This funding was given to more than a dozen countries with varied results. Long term effects can still be seen in countries where this money was utilized wisely towards an effective bio-diversity campaign, and more specifically towards counterpoaching. Botswana, Zimbabwe, and Senegal are examples of countries that effectively used bio-diversity funds in a manner that promoted economic growth by protecting indigenous wildlife. Unfortunately, a

⁴Leites Nathan, and Wolf Charles Jr. Rebellion and Authority: An Analytic Essay on Insurgent Conflicts. (RAND, February 1970).

majority of these countries mishandled this bio-diversity funding and chose to spend it on high-tech, expensive, and ultimately disappointing programs rather than on adopting low cost, sustainable, and ultimately more effective alternatives that addressed the root of the poaching issue.⁵

C. THE TYPICAL RESPONSE

Many governments in sub-Saharan Africa have fallen prey to the notion that victory against poaching requires high levels of expenditure on highly sophisticated, and technologically advanced systems. This paradigm is analogous to the dominant counterinsurgency approach adopted by the United States in Vietnam and by the Soviet Union in Afghanistan. In both examples, the result was an ineffective application of technology against an asymmetric and non-linear threat. We argue that an approach that takes into consideration the capabilities and limitations of each state stands a greater likelihood of success. This type of approach seems unorthodox because it is not based on any preconceived notion of how strategies have been derived in the past. The uniqueness of the situation in Africa requires that non-typical strategies be developed to address the poaching problem.

⁵Interviews conducted with Lt. Col. Gary Walker, USA (Ret.) former DAO Namibia and Botswana, and William Ellis former SAO Senegal.

Given that poaching is a problem with linkages to sovereignty, economy, and the population as a whole, it is an issue of concern. Due to inherent inefficiencies and limitations of manpower, training, and budget, the majority of police forces within sub-Saharan Africa are ill-suited to conduct counterpoaching and border security operations. By default the burden of the counterpoaching effort falls upon the military. Because there is little or no external military threat to many of the countries of sub-Saharan Africa, the military has the freedom of maneuver to focus their energies on counterpoaching. Actively involving the military in counter-poaching achieves two positive ends. First, it physically, as well as perceptually, removes the military from the stereotypical role of being the personal strong arm of the regime. Second, it involves them in pursuits that are beneficial to the populace as a whole. A military used in a counterpoaching role is no longer seen as a probable tool of government repression. Instead, it is seen as a competent, professional military serving the public good.

Although the host nation military force may be the best candidate for counterpoaching, it will often lack the skills and training necessary to counter the grass roots threat posed by poaching. It is here that proactive US military involvement can have the greatest impact. Military-to-military contact through Joint Combined Exercises for Training (JCET) and Mobile Training Teams (MTT) provides the best vehicle for pursuing such a policy of assistance. JCETs and

MTTs have the additional benefit of fostering the kind of civil-military relationship that is the cornerstone of US philosophy of military subordination to civilian authority.

D. SIGNIFICANCE

United States involvement in Africa has, and will, continue to increase. USAID's projected expenditure for Africa in FY 98 exceeds one billion dollars.⁶ This figure does not reflect any costs which may result from crisis relief or humanitarian assistance should they become necessary. In light of the fact that the US has chosen to become involved in places like Rwanda, Somalia, Liberia, and Zaire (Democratic Republic of Congo), it only makes sense to find ways to engage these countries prior to crisis. Doing so will reduce the cost in dollars and cents as well as in lives. The added benefits of engaging African militaries now is twofold. First, African nations actively engaged with US military training programs will be better prepared not only for counterpoaching operations, but for participation in the African Intervention Force Initiative. Secondly, US Special Operations Forces benefit by gaining first hand the experience of working with host nation forces under conditions that cannot be duplicated in training centers or simulated exercises.

⁶USAID, The USAID FY 1998 Congressional Presentation.

E. METHODOLOGY

This thesis will use case study analysis to evaluate successful and unsuccessful counterpoaching campaigns. The themes discussed in the introduction provide the background for further analysis. In Chapter II, we will define and describe the poacher/counterpoaching model as it applies to internally and externally sponsored poaching. We will then present ideal strategies for generic internal and external poaching scenarios prior to applying the model to actual cases in Africa.

Chapter III employs case study methodology to evaluate four case studies in sub-Saharan Africa. These cases (Kenya, Zambia, Zimbabwe, and The Central African Republic), provide a representative group of poaching scenarios which we both successful and unsuccessful in their outcome. Having identified key elements of successful and unsuccessful counterpoaching campaigns, in Chapter IV we will recommend possible US courses of action as a participant in counterpoaching in Africa. Furthermore, we will highlight the benefits associated with the use of US Special Operations Forces in assisting host nations in their efforts to combat poaching and will comment on the typical pitfalls experienced by program sponsors who are unwilling to develop strategies that are compatible with host nation capabilities. Finally, we provide a word of caution regarding the ultimate ownership of developmental programs.

II. ADAPTING THE COUNTERINSURGENCY MODEL TO COUNTERPOACHING

A. MODEL SELECTION

To analyze and understand more clearly the poaching/counterpoaching problem in sub-Saharan Africa, we have chosen to use an insurgency/counter-insurgency model. The similarities that exist between the poacher and the insurgent, and thus the measures required to successfully counter each of these problems, are extremely close. That these two “problems” are similar in nature, is not just our hypothesis, but one that is accepted by some in Southern Africa.

General L.M. Fisher, the senior military officer of the Botswanan Defense Forces included both insurgency and poaching in the same threat category as he detailed the current and future threats to the entire Southern African Region.⁷ Fortunately, it is exactly these similarities that allow the ease of adaptation from a comprehensive counterinsurgent plan to one of counterpoaching.

B. INSURGENT/COUNTERINSURGENT MODEL

Probably the single most useful tool in understanding the problems of an insurgency is the basic model introduced to us by Dr. Gordon McCormick, as part of his seminar on guerrilla warfare taught at the Naval Postgraduate School. This

⁷Fisher, L.M. (Major General, Botswana) “New Threats and New Roles For the Military” Seminar: Role of the Military in Democratization: A Southern African Perspective. 18 June 1996.

operate if it is to be successful in its efforts to defeat an insurgency. This model also illustrates the paths that the insurgent or guerrilla follows to separate the population from the government as well as its possible connection to an external support mechanism. The model is useful in analyzing and explaining the shortfalls of historical counterinsurgency efforts, such as our own flawed and failed efforts in Vietnam and the Soviet Union efforts in Afghanistan.

The model we have chosen is built around the interactions of four sets of actors. The actors are comprised of the **Government**, the **Guerrilla**, the **Population** and the **Partisan or External Support Mechanism**.

C. POACHING DEFINED

Before we can modify and apply the insurgent/counterinsurgent model to poaching we must first describe and define poaching and the varied types of poaching problems. For the purpose of this thesis, poaching is defined as the organized, illegal killing of wild species of game animals for commercial purposes.

Sub-Saharan African countries, in truth, face two primary types of poaching. These primary types are classified as **Internal** and **External** poaching. Internal poaching consists of the organized efforts of groups or individuals, within the borders of their own country, to illegally harvest game for profit. External

Insurgent/Counterinsurgent Model

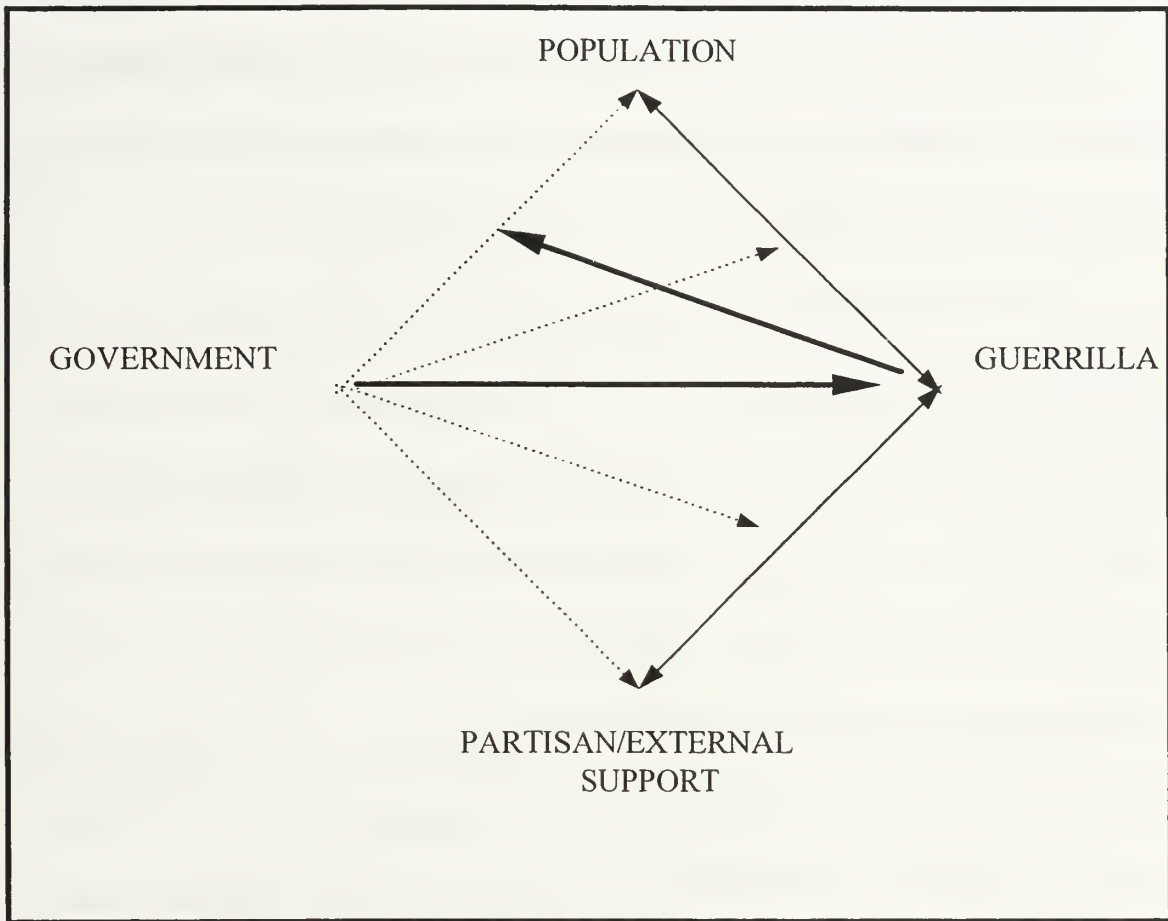


Figure 1. Insurgent/Counterinsurgent Model

poaching consists of the organized efforts of groups or individuals who cross borders to illegally harvest game and then remove the animal remains to be sold elsewhere. In the both internal and external poaching, the end result may be the sale of the animal remains outside the country of its origin. The true distinction between the two is that internal poaching deals with a country's own citizens

poaching game within its borders while external poaching deals with foreigners violating a border to illegally harvest the game of another country.

Just as there are two primary types of poachers, that is to say, internal and external, there are also two primary reasons why poachers conduct these activities. The two primary rationales for poaching are **Commercial** and **Subsistence**.

Commercial poaching, as described previously, is the illegal harvest of wild species for future commercial profit. Subsistence poaching is the small scale, unauthorized harvest of animals, for the sole purpose of consumption. This is typically done in rural areas by the extremely poor and by those who still practice the traditions of ancient cultures. Subsistence poaching, although technically illegal, is not considered to be a serious problem by most African nations. For this reason, we will focus our analysis on the more destructive internal and external commercial poaching problems, with one exception. We will cover one unique case of a hybrid of external/subsistence poaching due to its large scale and its destructive potential. This hybrid form of external/subsistence poaching is the unique case of large scale organized subsistence poaching that is currently taking place on the Central African Republic's border where Sudanese rebels have resorted to poaching in order to supply meat to their forces resisting the government in Khartoum.

The cases we will analyze are depicted in the following matrix (Table 1), showing countries affected by types of poaching, (Internal or External), and rationales, (Commercial or Subsistence).

Countries Facing Poaching Problems by Type & Rationale

	COMMERCIAL	SUBSISTENCE
INTERNAL	Kenya Zambia	Central African Republic Kenya Zambia Zimbabwe
EXTERNAL	Zimbabwe	Central African Republic

* Internal/Subsistence poaching not considered a great threat

Table 1. Countries Facing Poaching Problems by Type & Rationale

D. THE DYNAMICS OF THE POACHING PROBLEM

Poachers, both internal and external, create the same dilemma for the government that is created by the insurgent. For this reason it is understandable that the initial reaction of the government would be to attempt to catch the poacher in the act and then either arrest or otherwise neutralize him. Certainly this needs to

be done. However, it is difficult to accomplish because initiative, as well as other advantages, lie with the poacher. The poacher as an internal problem is typically a sub-set of the local population. As a member of the local community he is inextricably linked to that community, where the government, or its representatives, are viewed as outsiders.

As an external problem, the poacher may employ or rely on locals to assist him in his activity. In many cases, individuals residing on the border of a country may have more in common with the external poacher racially, ethnically or religiously, than they do with their own government. This phenomena is common throughout Africa, where national boundaries were drawn according to convenient geographical land marks, rather than on any ethnic, tribal or racial basis.

Whether internal or external, the poacher retains the initiative and chooses the time and place of his activity. Typically the government becomes aware of his actions only after the carcasses of the animals are found. Even if the government is capable or fortunate enough to catch or kill a few poachers there will always be others to take their place because the lure of money is greater than the risk of being caught. Until the risk of capture exceeds the expected payoff of successful poaching there is no incentive for poachers to stop their activities. Only when a government has increased the likelihood of being caught, to a level that outweighs the rewards for poaching, will poachers choose to cease their operations.

Due to the high payoff and low risk, the one dimensional strategy of killing or capturing poachers is of only limited value because the poacher is a manifestation of a much larger problem. Before a government can formulate an effective strategy that will deter poaching it must first understand the root causes of poaching.

E. THE ROOT OF THE POACHING PROBLEM

If a government's counter poaching strategy is to be successful, it must look past the temptation of focusing all its efforts on the destruction of the individual poacher. The government must address the questions of why poachers exist, as well as who they are. Poaching is the product of economics, greed, and ignorance on several levels. In the simplest economic sense, poaching exists because markets exist. Whether the products are sold for ornamental or medicinal purposes, as in the case of elephant tusks and rhino horns, or for consumption, as in the case of bush-meat, an established market desires these goods. It is this demand, combined with poverty and a failure to see the true value of the animals, that persuades the internal and the external poacher to risk his life in the role of the supplier. It is understandable that an individual, whose annual gross income may be less than \$100 US, would risk his life for one nights work and the chance to earn \$200 US for a rhino horn. In reality his benefit may be greater than money alone, because in many cases the poacher and the animal are in direct competition

for grazing or farm land. So too, it is understandable that the middle-man, the who sent the poacher on the “mission,” would accept these risks because that same rhino horn will sell for thousands of dollars on the outside market.

For both the poacher and the middle-man, the game animal is seen to be of no value in its live state. The combination of poverty, greed, and ignorance manifests itself as poaching. For this reason, a government that fights only the manifestation, that is to say the poacher, is doomed to fail because it has failed to address the poverty, greed, and ignorance that has given birth to the poacher.

F. THE GOVERNMENTS ROLE

The first challenge to the government is one of recognition. The government must recognize that the poaching problem poses two distinct challenges that correspondingly, have two distinct solution sets. First, is the immediate or short cycle challenge of halting the poacher and preserving the threatened animal species. Second, is the future or long cycle challenge that must look beyond the manifestation of the poaching problem and address its root causes. The long cycle challenge focuses on building a national infrastructure and economy, to produce the type of prosperity that results in a government being capable of addressing the roots of discontent that give birth to poachers and other illegal activity. The ability of a state to address the long cycle challenges is a

direct reflection of its “strength.”⁸ Although short and long cycle challenges have different solutions they are in fact linked. The focus of this thesis is on the short cycle challenge because it is the first step in addressing the greater concerns of the long cycle challenge.

A government that recognizes its animal population as a renewable resource must develop a sensible program to stop the poacher’s operations. To design this program a thorough understanding of the nature of the problem must be married to the resources available to counter the problem. This program must be comprehensive and avoid the temptation of focusing solely on the manifestation of the problem, the poacher. It is only through a comprehensive approach that a government can achieve success.

To accomplish this task, in an internal problem, the government must break through the poacher’s veil of anonymity by strengthening its own bond with the population. Unlike the poacher who is an accepted community member, the government must gain acceptance through its actions. This is extremely difficult in rural areas where a majority of poaching takes place and where government control and influence are inherently weak. Poachers take advantage of this imbalance by sharing their profits with the community, thus strengthening their

⁸For a complete discussion of a state’s relative strength in relation to internal societies see, Migdal, Joel Strong Societies and Weak States. (Princeton University Press).

own position and further destroying any linkage between that population and the government. For the poacher, this link is the most crucial aspect of his operation.⁹ It provides a support base from which to operate, and provides a certain level of concealment and protection from governmental action. This link provides everything the poacher needs to carry out and sustain his operations. The concealment provided by the population essentially blinds the government to the poachers activity. Unable to see, the government is rendered impotent in its efforts to confront and combat the poacher. For this reason, the link the government establishes with the population becomes the pivotal point in its attempts to counter the poacher. The stronger this relationship, the easier it will be for the government to sever the tie between poacher and population. Strengthening this connection directly and proportionally weakens the bond that exists between the poacher and the population. If a government can successfully co-opt the population, and if that population freely gives information on the activities or identities of the poachers, his veil of anonymity begins to unravel. Employing a three pronged strategy of strengthening the bond with the population, severing the ties between the poacher and the population, and pursuing the poacher directly, will result in the greatest likelihood for eventual success.

⁹Leites Nathan, and Wolf Charles Jr., Rebellion and Authority: An Analytic Essay on Insurgent Conflicts. (RAND, February 1970).

The government can do this in several ways. One way is to emplace government representatives in the outlying communities to be responsive to the community's needs. In the case of communities that live in the immediate vicinity of the animals, the government must educate the populace on the value of the animals to that specific community, not just the state. This is typically done by a government directly reinvesting money gained from animal based tourism in these communities and by employing individuals from these communities as game wardens. Once the community becomes a stakeholder in the protection of the animal, and realizes the monetary benefit of doing so, they are more likely to be intolerant of the poacher. The animal that once represented an immediate, but one-time, profit, now represents a livelihood that can support entire communities.

Once the bond between the poacher and the populace is broken, the poacher becomes visible to the government and he can be arrested or otherwise neutralized. This indirect approach works in both cases of internal and external poaching. However, in the case of external poaching the government has another link that must be disrupted in order to be successful. This is the link that exists between the external poacher and his support structure or those within the country who may feel kinship with the poacher on an ethnic basis. Because these ethnic bonds may transcend borders, the government must use the same approach of strengthening its tie with its own population, while simultaneously interdicting the poacher and

applying pressure on his government. Disruption methods may include diplomatic efforts between the heads of state in the bordering nations as well as more active measures such as cross border operations to interdict the external poacher as he attempts to carry out his crime in the host nation.

Poaching, both internal and external, must be addressed in these more indirect and comprehensive ways if the government is to have any hope in saving its animal resources. It should also be stated that there is an international dimension in all cases of poaching. In both cases, the government that is facing the problem must not forget the international community. After all, the outside community is the financial supporter, through tourist dollars, and can be of great assistance in applying diplomatic pressure on governments that benefit from the export of these illegal goods, or turn a blind eye on their citizens who are the external poacher. Outside sources have also supported governments facing poaching problems with financial support and military training and assistance.

G. APPLYING THE COUNTERPOACHING MODEL

In order to make McCormick's insurgent model applicable to poaching and counterpoaching, minor modifications must be made. These modifications include changing the **Guerrilla** apex to read **Poacher** and in removing the path of attack from the poacher to the government. Unlike the insurgent, the poacher has no

desire to directly challenge the government. Rather, he is satisfied to conduct his operations in a way that exploits the government's inefficiencies.

H. COUNTERPOACHING STRATEGIES

Having identified the primary types of poaching, the commercial or subsistence rationales, and modified the counterinsurgency model we will describe the ideal strategies for each type of poaching problem. They do not, at this stage, take into account all possible mixed strategies which are defined by each states unique set of capabilities and limitations. Variables which effect a country's ability to implement a given strategy will include social, political, economic, or military capabilities and limitations. The degree to which these capabilities and limitations play upon a country's counterpoaching strategy will be addressed in our conclusions and recommendations. Figure 2 shows the appropriate strategies for addressing the poaching problem.

1. Internal/Commercial Poaching

Faced with this type of problem the government must pursue a strategy which places emphasis on strengthening its relationship with the population in which the poacher resides (Axis A). By strengthening the bond with the local population the government must convince them that it is in their best interest to expose the poacher rather than to protect him. This, in effect, severs the tie that

Counterpoaching Model

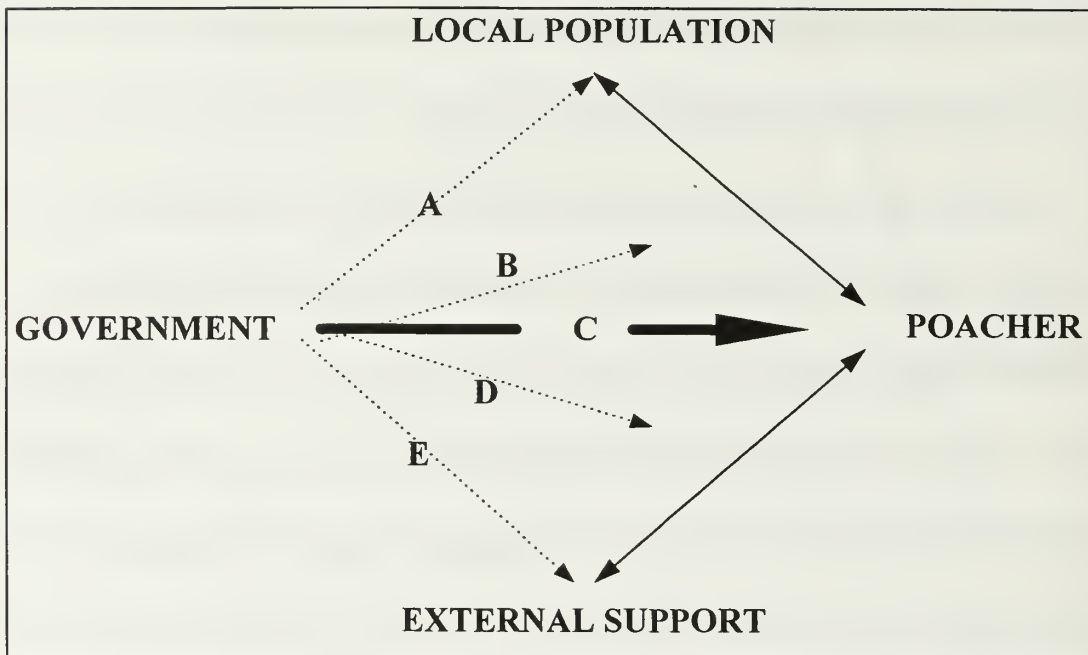


Figure 2. Counterpoaching Model

exists between the poacher and the population (Axis B). Now exposed, the government can effectively operate against the poacher (Axis C). The government's ability to operate along axis C is directly related to its success in effectively operating along axis A and B.

2. Internal/Subsistence Poaching

The government's strategy for this type of problem is identical to the strategy for combating internal/commercial poaching. The government must be able to operate effectively along all three axes, A, B, and C. Additionally, in an internal/ subsistence problem the government has the option to provide alternative

food and material substitutes which will eliminate the population's need to kill wildlife.

3. External/Commercial Poaching

When faced with an external/commercial problem the government's strategy must be twofold. First, it must operate along axis A, B, and C, as in the case of an internal/commercial problem. However, operating along axis A, B, and C only, is insufficient because it fails to address the external factors bearing on the case. Secondly, the government must operate externally. External factors can only be addressed by operating along axis E, and D. Operating along axis E entails diplomatic measures to illicit counterpoaching support from the government of the poacher, and efforts to bring to bear the attention and resources of the international community. Operating along axis D may be done with or without the consent of the poacher's host nation. Actions along this axis include cross-border operations to interdict poachers and their logistics support, or combined operations. Combined operations depend upon diplomatic successes along axis E that result in the poacher's government taking steps to neutralize him before he crosses the border or after his return.

4. External/Subsistence Poaching

When faced with this fourth type of problem the ideal strategy is identical to the one taken in external/commercial poaching. The destructive power in

external/subsistence poaching is, in most cases, no greater than that of an internal/subsistence problem. However, a distinction must be made when the scale of destruction or loss is of a magnitude that rivals a commercial poaching problem. This elevated level of destruction is exactly the situation that we will explore in our hybrid case study of the Central African Republic.

In the following chapter we will present the case studies of Kenya, Zambia, Zimbabwe and the Central African Republic. Each case study is divided into three sections; Background, Country Approach, and Analysis. Background, will set the stage with a brief description of the poaching problem in the country. Country Approach, illustrates the course of action each country chose to combat the poaching problem. Finally, in the Analysis section, we will apply the counter-poaching model to each case and illustrate the strengths and weakness of their Approach.

III. CASE STUDIES

This chapter will illustrate the different approaches of four states attempting to ensure the survival of their animal resources and subsequent economic benefits associated with that survival. These examples highlight the importance of addressing the poaching problem in the same light as a guerrilla movement or insurgency and stresses the importance of cultivating solutions that emerge from a grass roots level. The focus of a grass roots strategy is on establishing, or strengthening the government's relationship with a specific population, village, or tribe. The examples provided demonstrate how the governments of Kenya, Zambia, Zimbabwe, and the Central African Republic have handled or currently handle the poaching problem within their borders. These countries illustrate the full spectrum of approaches that have been used against poaching. As described in the previous chapter, there are variety of options available to governments trying to cope with poaching. However, before the application of any specific course of action can begin, the government must appreciate the problem in its entirety. Governments that can objectively examine the problem and develop campaign strategies, that address the problem as a phenomenon composed of differing variables, stand a greater chance of defeating the problem. Conversely, governments which fail to recognize the full dimensions of the problem are destined to approach the problem piece-meal and find themselves treating the

symptoms instead of the root cause. This is important to bear in mind when examining the various ways in which these governments have attempted to confront the problem. The results of these policies clearly demonstrate that approaching the poaching problem in an integrated and comprehensive manner can mean the difference between effectively combating the problem, or falling prey to a one size fits all approach that will be destined to fail.

A. KENYA (INTERNAL /COMMERCIAL)

Kenya is an example of a country that had the capability to implement virtually any counterpoaching strategy. What is significant about Kenya's approach is that it solely focused on protecting the animals by eliminating the manifestation of the problem, that is to say, the poacher. This strategy alienated local populations and exacerbated tension between those populations and the animals. By applying our counterpoaching model to an internal/commercial poaching problem, the strategies derived focus on strengthening the bond between the government and local populations. This creates an environment that is hostile to the poacher and eventually precludes his presence as he is supplanted by the stakeholder. This case study will illustrate, that the measures Kenya implemented achieved the exact opposite effect. Consistent with the application of our model, this contradictory approach could only result in failure.

1. Background

The first attempts at managing wildlife in Kenya came with colonization. Once British authority had been established, all wildlife became the property of the Queen. The British eventually established game preserves which became Kenya's national parks. Nairobi National Park, Kenya's first, was established in 1946. The establishment of national parks meant that the indigenous peoples who had always made use of the natural resources within these parks, both animal and otherwise, were denied their use. This first step, even if it was an honest attempt to preserve wildlife, caused the first emergence of tension between the indigenous people and established authority regarding the country's wildlife resources. After independence came to Kenya in 1963, the new government maintained control of the national parks through the establishment of the National Park System. Profits from the national parks were supposed to directly fund the newly independent country's economic development.¹⁰ The reality, however, was that government control of the preserves continued to prevent local populations from using the country's natural resources and the vast majority of revenue generated from tourism never made it to the local population. Unable to use any of the land in which the animals lived, and unable to reap any of the benefits the animals generated in the form of tourist dollars the average Kenyan came into direct

¹⁰Lusigi, W.J., "New Approaches to Wildlife Conservation in Kenya," *Ambio* Vol. 10 , No. 2-3, 1981.

competition with the animal population for survival. At this point the existence of wildlife served only as a hindrance to the average Kenyan. The result was the emergence of an internal/commercial poaching problem. With ivory worth \$100.00 a pound and rhino horns bringing as much as \$50,000.00 a piece, it is no wonder that these animals were poached and that the elephant population dropped from 1.3 million to around 600,000 in less than a decade.¹¹ In 1989, poaching became so extensive that the responsibility for wildlife management was given to a new organization called the KWS (Kenya Wildlife Service), headed by Richard Leakey. It was through Richard Leakey that Kenya's plan for combating poaching was developed.

2. Kenya's Approach

Having realized the importance of protecting its animal resources, the Kenyan government, and KWS in particular, had to decide upon a course of action. The two major approaches available to wildlife management programs are conservation through protection, and conservation through utilization. Kenya chose to adopt the conservation through protection approach. What this meant to Kenyans was that under no circumstances would it be acceptable to kill any of the country's wildlife, and that the government would exercise complete control over the animals and the human populations around animal parks and preserves.

¹¹Cater, Nick, "Preserving the Pachyderm," Africa Report, November - December 1989.

Countries like Tanzania and Zambia who suffered similar levels of loss regarding elephant populations sided with Leakey, who successfully lobbied for and obtained a ban on ivory through close coordination with CITES (Convention on International Trade in Endangered Species). In October 1989 the international community banned all sales of ivory.

The philosophy behind the ban was simple and straight forward. By eliminating or significantly reducing the demand for ivory, it would naturally follow that elephant populations would rebound. The ivory ban, however, led to a standoff between the national government, charged with enforcing the ban, and the local population who drew no benefit from the animals. Because of the black market demand that existed for ivory and other animal products the Kenyan government felt that the only way to fully protect animal populations was to make the ban permanent. Lifting it would only harm existing animal populations and would allow the black market to continue. Strict governmental control over the animals and the creation of protected environments further alienated the population and put them in direct competition with the animals for living and agricultural space. As this level of competition and animosity rose, it is not surprising that the average Kenyan citizen, who gained no benefit from the animals, could see no value in the animals except for the quick money to be made by killing them and selling their body parts.

Although tourism generated the greatest revenue of any industry in Kenya, the majority of this revenue never made it to the local villager, the one who stood the most to lose from an unchecked animal population. Add to this the fact that elephants routinely destroy crops, damage property, and harm or kill locals, and it should come as no great surprise that there was little incentive for locals to willingly uphold the written law. Combined with heightened levels of demand and subsequently higher prices paid for ivory, the ban soon achieved the reverse of its desired effect. Kenya, however, was unique in having an ally in Richard Leakey. Leakey was an extremely charismatic and popular world figure who through donations was able to virtually single-handedly bankroll the Kenyan effort.

At the top of his list was the development and training of a Kenyan ranger force who could enforce the ivory ban by pursuing the poachers directly. Kenya also started a program of fencing off animal preserves within the country, denying access to all but a few highly influential groups or individuals. Given the National Geographic representation of the animal's plight, it was unthinkable to actively manage, through either hunting or culling, the increasing size of the animal population. Kenya's hands off approach initially showed signs of success as herd sizes grew. However, as unchecked animal populations exhausted the resources within the preserves, populations fell as the habitat could no longer support them. Part of the irony of Kenya's strategy of protection was that protection did little to

ensure the long term survival of wildlife. While big game hunting was still legal, those who made their living in the industry had a vested interest in securing stable wildlife populations. More than a decade before the ivory ban was put into effect hunting was banned in Kenya. After hunting was banned in 1976, the population of wildlife in Kenya fell between forty and sixty percent.¹² Kenya learned nothing from this first failed effort to protect its wildlife. The more drastic measures taken in conjunction with the ivory ban only made things worse.

Despite virtually unlimited resources, Kenya failed to confront the dilemma of how to grapple with the variables that led to the animal population's decline, while at the same time maximizing the value added to the economy by the animal population's presence. By fully understanding and approaching the poaching problem initially, a great deal of time, money, and animal resources could have been saved. At the same time, the country could have benefited almost immediately from the revenues generated by a healthy, sustainable, and renewable natural resource.

3. Analysis

Kenya exemplifies the internal/commercial poaching problem. The solution to this problem, as prescribed by our model, is one that emphasizes

¹²Dr. Brian Child, Statement by Dr. Brian Child, Submitted to the House Committee in International Relations, Subcommittee on Africa on Economic Development of Africa's Resources, March 17, 1997.

strengthening the relationship between the community or village in which the poaching problem exists and the government. The approach Kenya took, by contrast, was one that only further alienated local populations. Because the Kenyan government failed to fully understand the poaching issue, they focused their efforts on the most recognizable manifestation of the problem. The result was a highly competent ranger force that had initial success in neutralizing individual poachers, but in reality failed to address the root of the poaching problem. Kenya provides a classic example of how forcing a strategy from the top down instead of empowering populations at a grass roots level can achieve the reverse of the desired effect. In many ways Kenya is the most tragic example of a misguided strategy. Kenya possessed almost limitless resources, international support, and a more diverse economy that was not solely dependent on the country's animal resources. Yet, for all their advantages the selection of an inappropriate strategy led to an unnecessary loss of wildlife resources and an ultimately flawed counterpoaching strategy.

B. ZAMBIA (INTERNAL/COMMERCIAL)

The case of Zambia is significant in that it illustrates how a country lacking in resources and without external support came to adopt and implement an effective strategy. Again, when faced with an internal/commercial poaching problem our model predicts that an effective strategy will be one that, first and

foremost, addresses the strengthening of the bond between the government and the local population. This is in fact what took place in Zambia through a grass roots based program. This grass roots program resulted in the transition of communities that allowed poaching to take place to ones that actively protected the wildlife resources within them.

1. Background

Zambian attitudes towards its animal resources, not unlike Kenya's, suffered from the colonial legacy of British rule. The restrictive wildlife policies of the colonial powers in Northern Rhodesia (Zambia) almost immediately put the local rural population in a position of competition and animosity with the animals. "Many activities of the British colonial government in Northern Rhodesia, such as implementing hunting quotas and license fees, restricting access to guns and ammunition, and establishing protected areas, effectively excluded Africans from most legal uses of and control over wildlife. In many ways the emergence of wildlife policy in colonial Zambia excluded the local residents from participating in the wildlife economy, thereby encouraging the establishment of illegal activities."¹³ In Zambia, the policies and attitudes towards wildlife management, saw little change after independence. By the mid 1990's the Zambian government began its first true efforts to halt poaching within its borders.

¹³Cohn, R., "The People's War on Poaching," *Audubon*, 96 (2).

In 1992, Zambian government raids on its internal/commercial poachers netted over a thousand guns and resulted in the arrest of almost 2000 individual poachers.¹⁴ As the Zambian government aimed their focus on the individual poacher they also attempted to devalue the animals and make them less attractive to the poachers. One way they attempted to curb poaching was to remove the rhino's horns and the elephant's tusks. This expensive and time consuming task proved to be a complete failure, as poachers killed the hornless and tuskless animals out of spite or anger anyway. Two other reasons why a poacher would kill de-horned animals gives good insight into the mind of the poacher. One explanation is that by killing de-horned or de-tusked animals the poacher has increased the value of any "stock" of animal parts he has or will obtain in the future because they have been made more scarce. The other reason is that the poacher often sees himself as a hunter who has a reputation to uphold. If he were to return with no proof of his hunting skill he would shame himself and his family. As a result, poachers often kill de-horned animals and cut off their ears or other body parts as proof that they were at least successful in their craft.¹⁵ Although the rise arrests and weapons confiscation was initially successful in curbing poaching, by early 1994 reports of animal losses, especially elephants and rhinos, were on the rise.

¹⁴Ibid.

¹⁵LaDelfa, John P., Based on interview with Commandant Owara, Central African Republic, Vakaga Region, April 1994.

To combat these losses Zambia focused its efforts not on more arrests and confiscation but rather on another natural resource, its rural population. This turn towards the population was not a new idea in Zambia, but the realization of the merits of grass-roots initiatives in selected parts of the country.

2. Zambia's Approach

In 1988 the government had sponsored a program called the Administrative Management Design (ADMADE) in limited areas throughout Zambia. Unlike the high profile efforts of worldwide conservation organizations in other countries, this program was spawned by and implemented by the Zambians themselves, without the prodding or assistance of outsiders. The ADMADE program was unique in its approach towards wildlife. Under this program local residents would receive benefits directly from wildlife-based tourism which, in Zambia, equated to hunting. Under the ADMADE program "revenues from Zambia's lucrative, legally sanctioned safari hunting are returned to local communities, which then make their own decisions on allocating the money."¹⁶ Under this program Zambians that had been at odds with animals were put in a position of protecting the animals in order to preserve their own economic well-being and better their lot in life. The success of the ADMADE program in the Luangwa River valley region led to the adoption of similar sustainable development programs throughout the

¹⁶Cohn, R., "The People's War on Poaching," *Audubon*, 96 (2).

country in the mid 1990's. The shift from protective conservation to a grass roots program of utilization under the stewardship of local citizens began to show results, as animal populations grew and poaching declined. In some cases the current park rangers were converted poachers who now saw the sustainable and renewable value the animals possessed as opposed to one time quick money brought by poaching. Zambian officials now indicate that poaching has been reduced by as much as 90 percent in some places, and wildlife-generated revenue reportedly has totaled as much as \$600,000 a year, 35 percent of which is returned directly to local communities.¹⁷

The successes of the ADMADE program stresses the paramount importance of implementing counterpoaching efforts at the grass-roots level. Today, in their eyes, Zambia's primary conservation problems stem not from poaching but from the world community. With millions of dollars in confiscated and surplus ivory locked up in warehouses, Zambia, along with several other nations claim that they should be allowed to dictate their own futures by selling ivory, which would allow them to support their counterpoaching, conservation and other developmental efforts. The restrictions of outside conservation organizations who condemn Zambia for its utilization practices and the UN imposed international ban on ivory

¹⁷Ibid.

sales is seen by Zambians as interfering with their ability to determine their own conservation policies and their economic future.¹⁸

3. Analysis

Zambia has been quite successful in combating its internal/commercial problem. This is the result of a variety of factors. As our model indicates, the best strategy for solving an internal/commercial poaching problem is to strengthen the relationship between the government and local populations. By doing so the poacher can be smoked out or otherwise rendered incapable of carrying out his operations. By making local populations the beneficiaries of any revenues generated by the existence of wildlife assets, the Zambian government made local populations stakeholders in the wildlife economy. In turn, they became proactive in preserving that economy and ensuring that it would last. This may not have been the rational used by the Zambian government when first considering how best to combat poaching, but luckily for Zambia it has proven effective. Zambia, unlike Kenya, did not have an inexhaustible supply of external support from which to fund its efforts. Zambia lacked much of the infrastructure that would be necessary to develop and sustain the kind of professional counterpoaching force that Kenya developed. Zambia suffered then, as it does today, from a corrupt

¹⁸Wickers, David, "Elephants Under Fire," The Sunday Times, 16 October 1994.

central government that is willing to turn a blind eye towards some poaching activity.

Zambia's decision to implement ADMADE throughout the countryside came almost as a fluke, rather than the result of a well thought out plan based on the capabilities and limitations of the country. In some ways ADMADE won by default, as the majority of expensive and ultimately flawed approaches Zambia tried were unsuccessful.

It would be unfair to say that Zambia accidentally settled on ADMADE, in truth they returned to a plan that was successful and coincidentally matched their limitations and capabilities.

C. ZIMBABWE (EXTERNAL/COMMERCIAL)

The significance of Zimbabwe's counterpoaching strategy is that they have come the closest to fully understanding the complexities of the poaching problem and have implemented a comprehensive and balanced counterpoaching program. Consistent with the predictions of our model, Zimbabwe's mixed strategy of pursuing both long and short cycle aspects in parallel has yielded immediate and quantifiable results.

1. Background

By the late 1970's and early 1980's Zimbabwe found itself in the same quandary as other sub-Saharan Africa countries regarding its wildlife resources.

Attitudes regarding wildlife in Zimbabwe were shaped, as in the two previous case studies, by the colonial era. Policies adopted during the colonial era resulted in the alienation of local populations who soon saw themselves in direct competition with protected wildlife. Local people suffered the consequences of being forced to live with the wildlife, but were unable to reap any benefit from their existence. The result was a feeling that it was simply better to rid the environment of the wildlife all-together. Poaching increased dramatically as did the mere killing of wildlife simply to eliminate it on the grounds that it constituted a threat to local villages. So strong was the resistance to wildlife management that it served as a rallying cry during Zimbabwe's anti-colonial movement which ended when the country gained independence in 1980.¹⁹ If this were not bad enough the poaching problem in Zimbabwe was exacerbated by the external/commercial poachers from Zambia who, feeling the pressure at home, began to look elsewhere to harvest animals for profit.

2. Zimbabwe's Approach

Zimbabwe's government faced significant challenges regarding its wildlife policies. Recognizing that the country's wildlife represented a renewable, sustainable, and lucrative asset, the government needed to find a way to convince people

¹⁹Hecox, Eric B. , Wildlife Management, A Comparative Analysis of Protection Versus Utilization, Kenya and Zimbabwe, Lawrence University, Wisconsin.

of the animals potential worth and to somehow change their attitude regarding conservation initiatives. Only by transferring some of the positive attributes of the wild-life's existence to local communities could the government hope to convince the people of the animals ultimate worth and to eventually check the extensive poaching which threatened the animal population. Two programs were initiated in the early 1980's that did just this, OPERATION WINDFALL, and the CAMPFIRE program. (Communal Areas Management Programme For Indigenous Resources). OPERATION WINDFALL specifically addressed the issue of hunting and utilization of elephants. It required that revenues derived from the utilization of elephant resources on communal land be invested in development projects that would benefit that particular area. In its first year, OPERATION WINDFALL generated \$96,000.00, which were used to build schools, clinics, and local infrastructure.²⁰

CAMPFIRE is a broader program than Windfall. Its goal is not just to protect selected species, but to protect a greater ecological system which will benefit all species and the habitat that sustains them. At the root of CAMPFIRE is the belief that, as natural resources become scarce, communities will gravitate towards a rational system of resource allocation that will best serve the

²⁰Hill, Kevin A., "Zimbabwe's Wildlife Conservation Regime," Human Ecology, Vol. 19, No. 1, March 1991.

community.²¹ Getting local villages to realize that the best allocation of resources lies in sustainable management and utilization vice capitalizing on a one time use is what ultimately allowed CAMPFIRE to be successful.

In order for local communities to feel as if they stand to gain from the animal's existence the system of land ownership and benefits derived from that ownership had to be addressed. What CAMPFIRE did in essence was to privatize Zimbabwe's natural resources and to transfer benefits derived from wildlife directly to the land owner, now the people who coexisted with the animals. By empowering the population at the grassroots level with the responsibility of managing natural resources, and by demonstrating wildlife's comparative economic advantage over other agricultural mediums for generating revenue, Zimbabwe was able to let the free market determine the fate of its natural, and more specifically, its animal resources.²² What evolved was a community-based natural resource management system in which producer communities were soon able to capitalize on the revenues generated by big game hunting, eco-tourism, and to a lesser extent by the products derived from controlled animal harvesting. Realizing that they stood to gain more by actively managing natural resources then

²¹Hecox, Eric B., Wildlife Management. A Comparative Analysis of Protection Versus Utilization, Kenya and Zimbabwe, Lawrence University, Wisconsin.

²²Dr. Brian Child, Statement by Dr. Brian Child, Submitted to the House Committee in International Relations, Subcommittee on Africa on Economic Development of Africa's Resources, March 17, 1997.

in simply eliminating them, local populations, as stakeholders in the system took steps to safeguard the wildlife's existence. Poaching all but died out and animal populations soared.

By the early 1990's, the revenues generated by CAMPFIRE had exceeded any forecasted expectation. In 1990 CAMPFIRE yielded just under Z\$ 1.1 million dollars of revenue, by 1993 it had yielded just under Z\$ 6.6 million dollars. More than 74% of the revenue generated went directly to the producer communities.²³ Today Zimbabwe faces other challenges regarding its animal resources. Ironically, Zimbabwe is having a difficult time deciding what to do with the surplus of wildlife it now possesses. Now that the country possesses a stable, robust, and sustainable wildlife population, Zimbabwe, along with other sub-Saharan African countries that have been successful in managing wildlife, has lobbied for a lift on the ivory ban. Increasing the quotas for big game hunting has not been successful in adequately maintaining ideal animal populations especially among species like the elephant that cause substantial damage to habitat and personal property if left unchecked. Staunch western animal rights groups have been successful in maintaining inter-national support for the ban and as a result the ban has remained in effect. Zimbabwe once again finds itself the owner of a natural resource it can not fully exploit.

²³Ibid.

3. Analysis

Zimbabwe has perhaps come the closest to understanding the full dimension of the poaching problem and has systematically applied a strategy that takes into account its level of available resources for combating the poaching problem and matched them against the problem in a way that optimizes their chances for success. Faced with a severe external/commercial poaching problem, Zimbabwe realized it lacked the resources and diplomatic horsepower to confront the problem directly. Zimbabwe also realized the importance of recapturing and maintaining control over an industry that had made up as much as one third of its generated revenue.

Once again, as the model suggests, the most important aspect of a successful strategy is to develop and maintain a positive relationship between the government and what under the CAMPFIRE program became referred to as the producer communities. By establishing this bond, Zimbabwe's government knew it would be possible to combat both external and internal poaching problems simultaneously. By privatizing the country's wildlife resources Zimbabwe, like Zambia, made local populations the beneficiaries of revenue generated by wildlife assets. Zimbabwe, however, pursued its strategy not by accident, but by design. Realizing that the vast majority of the poaching problem was external in nature, and that they lacked the diplomatic and military muscle to address bordering

countries directly, Zimbabwe realized that the only way for them to effectively counter this external threat was to somehow involve their own citizens in the campaign.

CAMPFIRE did just that, as well as a number of other things which directly benefited not only the producer communities but the Zimbabwean economy and political state at the same time. CAMPFIRE enjoys the full support of the Zimbabwean government and as a result there have been almost no cases of corruption associated with the program.²⁴ As mentioned earlier, as much as 74% of the revenues generated by CAMPFIRE have been reinvested into the producer communities.

If there is any shortfall in Zimbabwe's counterpoaching strategy it lies in its inability to more decisively affect the external support mechanism that sponsors and encourages trans-border poaching. Zimbabwe, however, by recognizing that it had limitations on its ability to project its influence across its borders, increased its chances of success by strengthening a relationship within an environment it could control. The result has been extremely positive. Poaching has all but been eliminated for commercial purposes, local communities enjoy the benefits derived from, and actively work to pursue wildlife resources, and cross border incursions

²⁴Ibid.

into Zimbabwe far less frequent. What occurred in Zimbabwe was an implementation of the right strategy for the right reasons.

D. CENTRAL AFRICAN REPUBLIC (EXTERNAL/SUBSISTENCE)

The significance of this case study is the unique nature of an external/subsistence poaching problem combined with a failure of the government to apply any type of comprehensive program. What we see in the Central African Republic (CAR) is a failure to realize the potential value of the abundant animal resources within the country, as well as a failure to understand the full dimension of the poaching problem. Predictably this has resulted in erratic and truncated initiatives. As our model predicts, failure to address the problem in a comprehensive fashion, taking into account both long and short cycle aspects, will, by definition, result in failure.

1. Background

The details of the Central African Republic's struggle to preserve its animal resources are not well documented, and little specific information is available in English. We have however, included the CAR because of its hybrid problem of an external/subsistence nature, and because in many ways, it is a country that could gain the most by applying the counterpoaching model we propose. The details of the situation in the CAR come from the personal

experiences of one of the authors during four trips to the country (two in 1994 and two in 1995) to conduct bio-diversity training with units from the army of CAR.

Unlike the other case study countries, the CAR is a former colony of France. The differences in the French and British colonial systems has left a mark on the conservation approaches of the CAR government. Like our other cases the CAR's past conservation efforts were administered by the colonial power. To a large extent the same is true today, because currently the Central Africans are not controlling their own resources. In my experience in the CAR, none of the wildlife park managers were Africans. This is not to say that hiring an experienced, foreign conservationist is a poor decision in and of itself; rather it is more a reflection of a lack of understanding and concern of Central Africans for their animal resources. In my opinion, this is perfectly understandable when you consider the governmental turmoil that the CAR has suffered since its independence. It is not surprising that a country, which experienced its first free and fair election in September of 1993, would be pre-occupied with problems which might out-weigh their concerns for the environment. Paradoxically, it is specifically the environment, and especially the animal resources, that could most benefit this poor country. Regrettably, the CAR's efforts to counter the poaching seems to be a matter of happenstance rather than deliberate planning.

In the early 1990's the CAR received a portion of the 15 million dollars of security assistance funding that was denied to Kenya due to their human rights violations. With this came the opportunity to conduct exchange training with US SOF personnel, through the Joint Combined Exchange Training (JCET) program. In 1994 the CAR, in an attempt to bolster an inadequate park ranger system, resorted to using regular army forces to stem the poachers activities in two separate regions. CAR counterpoaching efforts are divided between the northern and eastern borders. In the north, Chadian poachers freely cross the sparsely populated border using camels and horses to pack out sun dried meat and skins as well as ivory. These items are then sold in local markets or are consumed by their families. In the east, Sudanese rebels freely cross the border to poach animals for meat to supply their war efforts.

To say that the CAR faces a serious poaching problem would be a gross understatement. In 1994, one of the authors witnessed the severity of one group of poachers efforts in the northern region while flying over their camp. The camp was a processing station that we estimated had two tons of meat drying on racks in the sun. The problems faced in the eastern region of the CAR were just as severe, if not worse. In 1995, while conducting a training survey in eastern CAR, one of the authors met professional hunter Rudy Lubin, whose safari camp had recently been surrounded by a platoon-sized unit of Sudanese rebels who demanded, at gun

point, all his medical supplies, food and fuel. Mr. Lubin explained that during his safaris he often encountered the remains of slaughtered animals and spent cases from AK 47's and other military weapons. It was his opinion that this was the work of the Sudanese because the eastern portion of the CAR is so sparsely populated the work could not be done by the indigenous population. Faced with these serious problems, the CAR has had little success in slowing the poaching problem.

2. CAR's Solution

Unfortunately the CAR has no real plan or strategy in regards to counter-poaching. This is a function of two very real constraints. First and foremost, many of the government and military officials encountered did not clearly understand, or see the value of, the unique animal resources they currently possess. Nor do they have a comprehensive understanding of the poaching problem. Secondly, the CAR army is currently too ill equipped and logistically impaired to conduct successful long duration campaigns necessary to counter the poachers. As a result, those forces that have received training through the JCET program are typically unable to apply the skills they have acquired after the US forces have left. The normal course of action is to focus all efforts on the obvious target, the poacher himself, by reacting to reports from park managers after a poaching camp has been spotted by plane. Once a camp has been spotted, park officials contact

military forces garrisoned in the area. The military forces are then supposed to react with an assault on the camp. This simple mission becomes very complicated when the limitations of the CAR army are factored into the equation. Typically the army has no maps of the area, so reaction to a specific location is very difficult. Mobility problems due to lack of roads, reliable vehicles and fuel, and the lack of communications equipment also hamper the reaction forces. In the end the poacher, having seen the plane, begins to pack out his illegal gains and heads for the safety of his border before the reaction forces have received notification from the aircraft. In short, poaching continues almost unchecked in a country that desperately needs the economic boost that these animals represent.

3. Analysis

When we compare the counterpoaching model to the course of action or approach the CAR has taken, we clearly see that they have fallen prey to the obvious, yet incorrect, approach of focusing all of their efforts on the manifestation of the problem. Faced with an external/subsistence problem of this magnitude, the CAR has failed to establish any relationship with those who could give them the best and most accurate intelligence on the activities of the poachers, the local population. While conducting training operations in both the eastern and northern regions, one of the authors was told by military commanders that we could not involve the local citizens because they were most likely poachers

themselves, and if they weren't, they were at least complicit in helping the poachers who pass through their villages. This is clearly an indication of failing to understand the full dimension of the poaching problem. The rosetta stone of solving the poaching problem has to start with the population and its link with the government. Failing to establish or strengthen this link is likely to doom almost any course of action to certain failure. To the credit of the CAR they have attempted to open diplomatic talks with the Chadian government to solicit their help in stemming cross border incursions. Whether or not the CAR would have any success in this area if they approached the government in Khartoum is doubtful due to the on-going civil strife. It is also questionable whether the Chadian government really has any control over its citizens who are engaged in poaching.

With the possibilities of limited diplomatic success, the CAR must change its focus and attempt to solve the poaching problem without assistance from its neighbors. To achieve any success the CAR must establish solid links with its subjects who live near the game parks and on the borders of the state. Once these links are established and the local citizens have been made stakeholders in the preservation of the animals, the government can begin to exploit this relationship to the detriment of the poacher. Accurate intelligence received from the locals can then be used by CAR forces to react in a timely fashion, or to set up ambushes to

interdict the poachers as they enter or exit the country. If the CAR fails to change its focus, the poaching will continue along with the loss of valuable resources.

IV. CONCLUSIONS AND RECOMMENDATIONS

The results of our research has provided a road-map for methodically analyzing the poaching problem in Sub-Saharan Africa. Through the logical comparison of poacher and insurgent we have constructed a framework in which African states can begin to address the poaching problem more effectively. We have developed a model that has predictive qualities and is effective in the formulation of counterpoaching strategies as well as the assessment of current strategies. In our effort to classify the poaching problem we have developed a typology that discerns the differences between internal and external poaching and the commercial or subsistence rationales for them. Through the classification of poaching types and the application of the model to four varied cases, we have offered analysis and comparisons that can assist African countries stem the losses to their wildlife populations. However, the rationale for our analysis goes beyond the limits of strictly providing insight into effective counterpoaching methods.

Our analysis, by illustrating the full dimensions of the poaching problem, stresses the necessity of a multidimensional approach. Essentially a two-dimensional problem, poaching consists of both long and short cycle problems. As a result, any country faced with poaching must clearly distinguish the two, and address them simultaneously. For a country to be successful, poaching must be contained in the short run in order to buy time to resolve it in the long run. This is

not to say that solutions are sequential and that when one problem is solved the country can then begin to address the other. In fact, in the end, solving the poaching problem requires moving in both directions in parallel.

The difficulty in understanding the dimensions of poaching is not unique to African States. In reality, misinterpretation and mirror-imaging on the part of the US and others has been just as serious. The obstacles to fully understanding the problem must be overcome if any future meaningful US engagement is to take place. In our opinion the US has a role to play in assisting both the long and short cycle poaching problems in Africa. However, for any engagement to be of value, the US will have to change the way it views Africa's animals and the poaching problem.

To date, poaching has been confined to the consciousness of environmentalists and conservationists in such organizations as the National Geographic Society, the World Wildlife Foundation, and assorted animal rights groups. Occasionally the topic of poaching may make it into national news papers and popular magazines.²⁵ However, in most cases, poaching and its side effects are defined only by the loss of specific animal species. Poaching is rarely seen as a manifestation of deeper social, economic, and political issues which, if left

²⁵See Bernstein, Richard "The Politics of Saving the Rhinoceros," The New York Times, 19 March 1997; "Saving The Elephant," The Economist, 1 July 1989; and Chadwick, Douglas H., "Elephants, Out of Time, Out of Space," National Geographic, May 1991.

unchecked, result in damage far greater than the loss of a few selected species.

Because poaching has not been properly defined, it has failed to garner the attention it deserves. By redefining poaching as something more than just loss of wildlife, it becomes obvious that the opportunity cost of failing to address poaching far outweighs the penalty of losing a valued natural resource.

A. OPPORTUNITY COST DEFINED

The opportunity costs in Africa of failing to protect wildlife resources can be measured across a wide range of variables. Failing to pursue policies which ensure the survival of scarce natural resources can cause states to lose economically, socially, and politically. Economically, states will lose tourist revenue. In each of the countries examined, wildlife is the primary reason for tourist patronage.²⁶ The number of tourists and the revenue generated by tourism indicate that the presence of wildlife has a direct link to a state's ability to generate revenue. It is therefore in the country's best interest to pursue policies which both protect wildlife and recognize it as a long term and sustainable resource.²⁷ Zambia and Zimbabwe have adopted these types of policies, Kenya and the Central African Republic have not. As Table 2 illustrates, the number of tourists as well as

²⁶ Africa, South of the Sahara, 1996, Twenty-Fifth Edition, 1996, Europa Publications Limited, 1995.

²⁷ For an in depth analysis and set of recommendations regarding economic, social and political aspects of tourism in developing countries see Emanuel de Kadt's, Tourism, Passport to Development?, A joint World Bank -Unesco study, Oxford University Press, 1979.

	1990			1991			1992		
	Tourist Revenue	Revenue as % of GDP	Number of Tourists	Tourist Revenue	Revenue as % of GDP	Number of Tourists	Tourist Revenue	Revenue as % of GDP	Number of Tourists
Car	3 Million	0.20%	1,599	*	*	*	*	*	*
Kenya	486 Million	5.30%	814,000	432 Million	5.20%	818,000	442 Million	5.20%	699,000
Zambia	41 Million	1%	141,000	35 Million	1%	171,000	51 Million	2.20%	159,000
Zimbabwe	64 Million	1%	606,000	75 Million	1.20%	664,000	105 Million	2.00%	737,000

Tourist revenue and GDP were taken from the United Nations Statistical Yearbook 1993

Tourist numbers were taken from Europa's Africa, South Of The Sahara 1996

* Accurate figures for the Central African Republic unavailable

Table 2. Tourist Revenue and Percent of GDP by Year

the revenue generated by tourism has increased in the years since these policies were adopted. Accurate figures regarding number of tourists and amount of tourist generated revenue proved difficult to find in any one source for all four countries. Conflicting figures lead us to believe that any precise evaluation or prediction based on these figures alone would be unwise. However, when general trends in tourism are compared to the existence of robust animal populations in countries whose major draw for tourism is their wildlife, it seems more than coincidental that the tourist industry in Zambia, and particularly Zimbabwe, is growing while it seems to be decreasing in Kenya. Kenya, in adhering to a one-dimensional policy of protection has experienced little or no gain in tourism or in tourist generated revenue. Policies regarding wildlife resources, those of protection and those of utilization have more than merely economic impact, they have a significant spill-over effect into social and political issues as well.²⁸

From a political and social standpoint, policies of protection, which either restrict or deny benefits derived from the existence of healthy animal populations, serve only to worsen the relationship between local populations and the animals as well as the relationship between the government and local populations. Overly protective policies will handicap local communities who are unwillingly forced to

²⁸Dr. Brian Child, Statement by Dr. Brian Child, Submitted to the House Committee in International Relations, Subcommittee on Africa on Economic Development of Africa's Resources, March 17, 1997.

coexist with the wildlife. Additionally, protective policies may force the government to play the heavy-handed role of policy enforcer and wildlife protector. This puts the government at odds with local populations who frequently live on the periphery where government control and influence is inherently weak. The government's inability to enforce its policy only demonstrates its inefficiency and does little to cultivate feelings of trust and confidence within rural communities.

Conversely, policies of utilization, that transfer ownership of animal resources to local populations as in the CAMPFIRE and ADMARE programs, serve to benefit the government as well as local populations while protecting the state's natural resources. Empowering local communities at the grass roots level and making them the beneficiaries of revenue generated from wildlife-related industry makes them stakeholders in the system. As stakeholders they tend to act responsibly and do everything within their power to optimize the benefits they derive from the existence of animal resources. Table 3 depicts the revenues generated and the distribution of funds from the CAMPFIRE program. This program is an example of how a successful utilization program can generate large sums of revenue and how that revenue can immediately benefit the producer communities. Programs such as these positively effect the relationship between the state government and the peripheral populations.

Distribution of CAMPFIRE Revenue in Zimbabwe

	1990	1991	1992	1993
Total wildlife income (Z\$)	1,098,855	1,975,243	5,511,450	6,597,353
Money retained centrally for general district administration	68.2%	36.0%	31.9%	13.8%
Money used for central wildlife management	3.0%	13.9%	9.6%	18.3%
Money devolved to 'producer communities'	47.0%	62%	58%	74%

Table 3. CAMPFIRE Revenue

B. PROTECTION AND UTILIZATION

As we look at the most recent record of elephant poaching in Africa, we see that there appears to be a causal link between programs of protection and the re-emergence of poaching. In September of 1997, Kenya experienced the loss of five elephants to poachers. Kenya claims that this is due to the June 1997 CITES conference that confirmed that certain countries could sell surplus ivory stocks.²⁹ What is telling in this incident is that none of the countries now employing utilization programs have reported any losses to their elephant populations as a result of the recent CITES conference. The reason seems clear to us. Kenya has chosen to blame the threat of lifting the ivory ban for their recent loss. In reality,

²⁹The Associated Press, "Fears of Ivory Poaching Climb After 5 elephants Killed," 2 October 1997.

Kenya's failure to develop a grass-roots program that creates stakeholders has allowed the re-emergence of poachers who see the opportunity for quick monetary returns. In Zimbabwe, Zambia, and other states engaged in programs of utilization, the poacher has not re-emerged because he is now the stakeholder. That is to say, he is no longer a poacher but a guardian of the animal for his own benefit.

C. ENGAGEMENT STRATEGY

After closer examination it is readily apparent why effectively protecting wildlife resources is in Africa's best interest. What may not be as obvious is why it is in the US's best interest to play a pro-active role in this process or how involvement in poaching can be a vehicle for pursuing other long term aims that further both US and African interests. At a state policy level, aiding Africa with domestic and economic development programs supports the US policy of Engagement and Enlargement. As outlined in the Congressional Presentation Documents (CPD), US policy goals regarding much of Africa are centered around democratization and economic development, professionalization of military forces, and improved civil military relations.³⁰ In our opinion, direct and sustained contact with US organizations, military or otherwise, provide the cornerstone for

³⁰See Congressional Presentation Documents, 1991- 1997, The Department of State, US Agency for International Development.

achieving these policy aims. First, direct contact allows for an accurate assessment of the host nation's needs. Second, it helps assure that US funds are utilized to their maximum potential and are directed towards their intended purpose. Finally, it contributes to a wider range of civil and military issues that US policy makers regard as paramount for developing democracies. These include subordination of military forces to civil government, and the furthering of democratic processes.

From the CPD's and from USAID projections, it is clear that the US will continue to spend money in an effort to assist African development. As long as the US has chosen to expend large sums of revenue on development in Africa, it should do so wisely, and in conjunction with programs that can have immediate and long term benefits for both African and US interests. We argue that counter-poaching is just the type of program that has the potential to deliver these benefits. However, for any response to be successful it must be couched in the terms of social, economic, political, and military constraints of the host nation and consider both short and long cycle aspects.

US policy makers must realize that the type of aid provided will play a deciding role in the strategy adopted for combating specific problems. Because of this relationship, the US has a responsibility to accurately analyze and suggest possible courses of action in conjunction with specific types of aid. All too often US aid packages focus on sophisticated or technologically advanced solutions

which are incompatible with the campaign plan that a state is capable of executing. Policy makers fall prey to mirror imaging and prescribe solutions that only more advanced states could hope to execute. Technologically advanced and complex strategies require proficiency in fundamental skills and capabilities which many developing states have not yet developed.

Without a firm foundation in basic skills, advanced systems are sub-optimized and in some cases rendered useless. The use of surveillance aircraft or advanced radar systems, for example, does little good if the costs are so prohibitive that the country can not afford to maintain or operate the equipment. From an operational standpoint, high-tech equipment is of little value if the absence of fundamental skills, such as land navigation, or standardized communications procedures negates the states' ability to deliver reaction forces to specific areas. Because most of the countries faced with poaching are faced with these kinds of limitations our focus must be on low-tech and easily sustainable programs. By focusing our programs on instilling fundamentals we increase the chances for success and sustainment while simultaneously laying the foundation for introducing future technological advancements which can then be optimized. Formulating an aid package that balances assets and capabilities while optimizing the likelihood for successful and sustainable operations will be pivotal to combating the problem. Due to the nature of the poaching problem and because of

the limited assets of most counties confronting it, the greatest likelihood for success will lie in low-tech, long-term, and sustainable programs.

D. SHORT CYCLE SOLUTIONS

Addressing the short cycle component of the problem lies with the state's military or wildlife ranger force.³¹ The role of US military forces in combating the short cycle problem will be that of trainer and advisor. This is a role for which US Special Operations Forces are ideally suited. SOF's regional orientation, unique language capability, and minimal "signature" provide a more flexible response to the needs of the host nation without over-burdening them with large deployments. In contrast to conventional forces who rely on large command structures, cumbersome logistic requirements, and regimented problem solving procedures, SOF are accustomed to thinking about complex problems which require unconventional approaches in environments that necessitate working within the limitations of the host country. Another distinct advantage of SOF is its low cost. Because of their smaller organic size SOF units are considerably more cost effective, typically providing results that are disproportionate to their size.

³¹Ransdell, Eric, "Heavy Artillery for Horns of Plenty," U.S. NEWS & WORLD REPORT, February 20, 1989.

E. A WIN-WIN SITUATION

One of the distinct advantages of this type of engagement is that both countries stand to gain from a variety of perspectives. On a large scale, the African country benefits by developing a capability to effectively protect its natural resources. Developing, protecting, and sustaining this resource will allow certain African countries to wean themselves away from single product economics as well as maximizing the return from already productive tourist industries. More robust and diversified economies can contribute to more stable environments in which occasional ebbs and flows in the world marketplace will not as readily translate into recession or depression.³²

From a military aspect, African militaries gain the benefit of receiving US doctrinal training which increases their professionalization, proficiency and expertise. These skills not only prepare African forces for counterpoaching duties, but in many instances are translated into the same skills required for participation in the African Intervention Force Initiative and UN peacekeeping operations. African militaries also benefit from the example set by US forces who demonstrate the ideal of military subordination to civil authority.

³²Clapham, Christopher, Africa and the International System. The Politics of State Survival., Cambridge University Press, 1996.

On a grand scale, the US benefits from this type of engagement as well.

Most sub-Saharan African countries continue to grapple with the challenges of the post-Cold War era. Many countries are in the process of developing stable governmental structures, professional military forces, and modern economies. It is in the US's interest to become involved at this stage for two distinct reasons. First, it is more cost effective to become engaged now, during the developmental process, than to wait until a system emerges that is either unacceptable or so unsuccessful that it gives rise to crises. Second, it is easier to shape specific aspects of an emerging state's environment during the developmental process. Consistent with the medical adage of "an ounce of prevention being worth a pound of cure," early US involvement, that addresses specific and localized problems before they become systemic, is nothing more than preventive diplomacy.

Militarily, the US benefits as well. Special Operations Forces engaged in the kind of exchanges we advocate are serving the exact purpose for which they were created. Although these missions are generically referred to as "training," they are in fact the employment of SOF in a key mission for which they were designed. This type of "live" environment operation can not be replicated at training centers, nor can evaluations from training centers honestly assess a unit's ability to carry out this type of operation. Engaged in these operations, SOF can further hone the skills required to conduct Foreign Internal Defense (FID), Special

Reconnaissance (SR), Direct Action (DA), and Unconventional Warfare (UW) .³³

Maintenance of these skills better prepares SOF for future missions, regardless of geographic location. Another positive attribute of these operations is the close personal contact and rapport that is established between members of both militaries.

F. THE MERITS OF ABSTRACTION

Whether the US will choose to engage Africa today in ways that we have suggested remains to be seen. This thesis illustrates how an indirect or unorthodox approach can be applied to a wide range of complex issues. The uniqueness of our approach is that it is not centered around any preconceived notion of how problems should be solved based on past experience. We don't presume that proactive US engagement in counterpoaching will be the sole determining factor in aiding the development of African countries. We do argue that this approach illustrates the possibilities of addressing problems through unorthodox means and that a "one size fits all" approach that may have been successful elsewhere may have little or no chance of success on the African continent. The unique aspects and attributes of Africa force the outsider to look for creative avenues when considering engagement strategies.

³³Howard, Russell D., "Army Special Operations Forces and the Pacific Century," Roles and Missions of SOF in the Aftermath of The Cold War, ed. Richard H. Schultz Jr., Robert L. Pfaltzgraff, Jr., and W. Bradley Stock National Defense University, 1996.

G. A WORD OF CAUTION

Simply identifying a potentially successful indirect or unorthodox approach is not a guarantee of success. The type of approach we advocate, by its nature, requires time to mature and show results. Additionally, the measures of effectiveness by which the approach is gauged may be defined differently by those who sponsor the program and those who implement it. This is especially true when the political, social, and economic differences between the sponsor and the recipient are profound. Failing to recognize these differences can result in the failure of an otherwise successful plan. Evidence of this can be seen in recent developments regarding Africa's conservation efforts.

At the most basic level the problem is one of perspective. To non-Africans and to Africans, the survival of diverse wildlife populations mean drastically different things. To many African states, wildlife is viewed as a natural resource to be utilized as a source of revenue. To westerners, Africa's wildlife is seen as a perishable treasure to be protected at any cost. Programs like CAMPFIRE and ADMADE have advanced to the point where the African concept of utilizing wildlife has come into conflict with the outside world's preoccupation with preserving it. Many African states have now fully realized the benefits of maintaining a sustainable animal population. They have also been able to determine the optimal size of that resource. Because of these program's success,

animal populations have exceeded their optimal size. To the African there is no reason not to take advantage of this surplus.

Failing to consider any perspective other than their own, westerners have attempted to stymie the African's effort to realize the full potential of surplus populations. Through the ivory ban and attempts at anti-hunting legislation, outsiders have tried to impose their will and dictate how Africans should use their own resources.³⁴ Africans see this as a continuation of a century long problem of external influence determining the plight of their continent.

Should the US choose to engage African states, it must avoid mirror imaging and the propensity for dictating what Africa can and can not do once specific programs begin to yield results. Sponsors of indirect or unorthodox approaches need to realize that the evolution of some programs may not follow anticipated or predictable paths. Additionally, the maturing process of these programs may further yield byproducts which are not readily palatable to the sponsor. Regarding Africa's wildlife, the US and world communities must be willing to allow Africa to determine what will be done with any excess population. Any plan or program that changes the perception of a population regarding a specific asset or resource may be initiated externally, but ownership of

³⁴Chris Chinaka, "Zimbabwe Hits Out Against Environment Campaigners," Reuters News Service, 11 June 1997, and "Congress Rejects Anti-Hunting Plan," American Rifleman, November/December, 1997.

that plan, along with any benefits derived from its implementation must ultimately be transferred to the state or community it effects.

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